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Israel

DEVELOPMENT OF BUILDING TECHNIQUES IN ISRAEL

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DEVELOPMENT OF BUILDING TECHNIQUES IN ISRAEL

by

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SUMMARY

Since the establishment of the State in 1948, the population of the country has increased from 750,000 to about 2,200,000 as a result of mass immigration and natural growth. In order to meet housing needs, about 437,000 dwelling units have been erected during this period. Investments in building in the recent years accounted for about 30% of overall investment in the national economy.

The problems involved in the planning and execution of housing schemes were far from simple. There was the need for rapid construction in order to meet the urgent housing needs of the new immigrants and that within the scope of a limited budget. There were periods, when the shortage of building materials and skilled labour was keenly felt. In order to attain the maximum output, several building systems had to be used simultaneously.

The following main methods were in use: 1. Building with hollow concrete blocks, 2. concrete casting in standard forms, 3. various light type structures. In the mountain areas rubble stone was used to some extent for construction of walls. From the economic point of view, building with factory made hollow concrete pressurised blocks has proved its advantages.

During the last few years considerable progress has been made in the use of precast reinforced concrete elements in the construction of new housing. This method offers the advantages of rapid execution, a reduction in the amount of skilled labour required and saving in the quantity of imported materials (steel, wood).

At the present time three local plants are also engaged in the production of medium size R.C. elements and their assembling on building sites. A new system using elements in the form of prefabricated reinforced concrete cells has been introduced last year.

Two main trends are clearly visible in the development of building systems in Israel:

1. The introduction of methods enabling savings in skilled labour as well as increasing the speed of construction.
2. Fuller exploitation of local raw materials in the building materials industry.

The main approaches to solution of the problem of skilled labour shortage and required speed of construction are:

a. Prefabrication of large elements in factories.
b. Introduction of more efficient methods of execution in situ by means of improved site organization and the use of mechanical equipment.

The use of mechanical equipment has already proved its advantages in the following types of work: central concrete production on large building sites, vertical and horizontal transportation, cutting and bending of steel reinforcement rods.

The following new developments are expected in the near future:

a. Increased use of prefabricated prestressed concrete elements.
b. The use of reinforced Ytong elements.
c. Increased use of gypsum elements for ceilings and partitions.
d. Establishing of two plants for the production of R.C. room-size elements.

Building research has already proved its vital integrity as one of the main factors in the drive towards the improvement of existing building methods and there is no doubt, that it will play an important role in the development of new methods.

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